Linolenic Acid (18:3w3)

Eicosapentaenoic Acid (20:5w3)

Docosahexaenoic Acid (22:6w3)

Figure 1. Structural formulas for fatty acids. The first number (before the colon) gives the number of carbon atoms in the molecule and the second gives the number of double bonds. ω3, ω6, and ω9 indicate the position of the first double bond in a given fatty acid molecule.

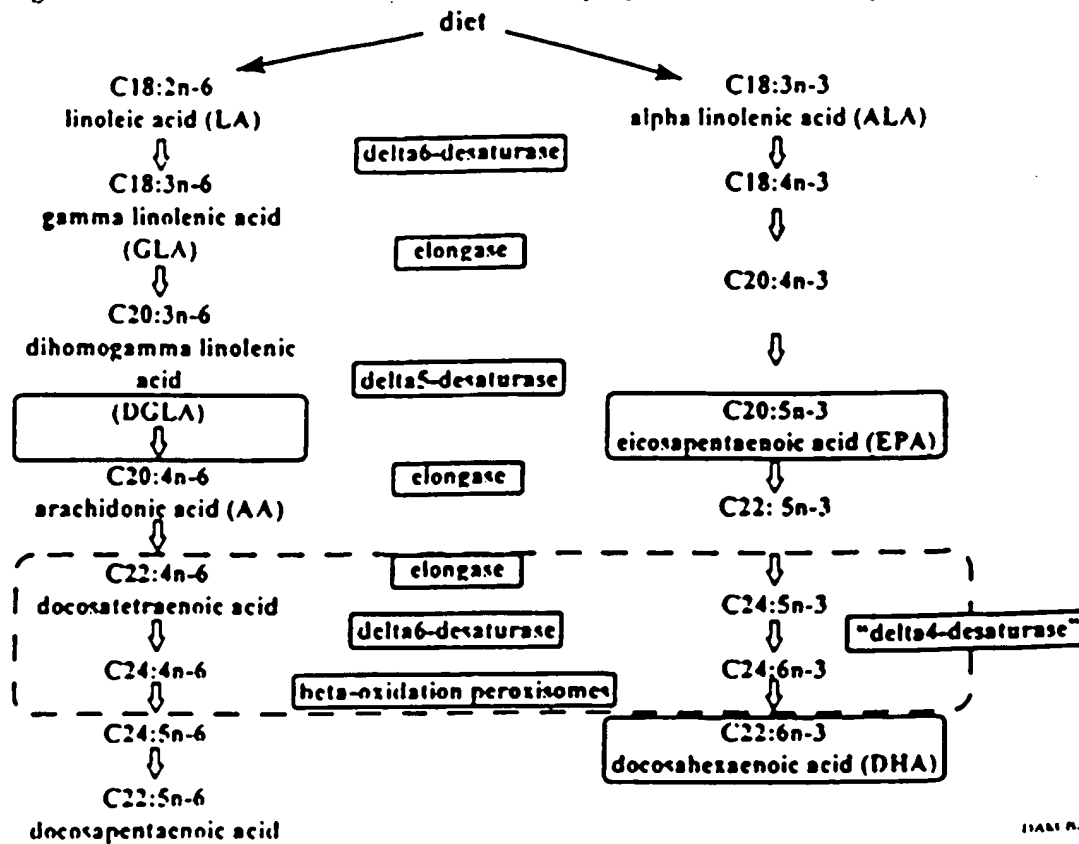# Elongation and desaturation of n-6 and n-3 polyunsaturated fatty acids

diet

C18:2n-6		C18:3n-3
linoleic acid (LA)		alpha linolenic acid (ALA)
⇩	delta6-desaturase	⇩
C18:3n-6		C18:4n-3
gamma linolenic acid		⇩
(GLA)	elongase	
⇩		C20:4n-3
C20:3n-6		
dihomogamma linolenic		⇩
acid	delta5-desaturase	
(DGLA)		C20:5n-3
⇩		eicosapentaenoic acid (EPA)
C20:4n-6	elongase	⇩
arachidonic acid (AA)		C22: 5n-3
⇩		⇩
C22:4n-6	elongase	C24:5n-3
docosatetraenoic acid	delta6-desaturase	⇩ "delta4-desaturase"
⇩		C24:6n-3
C24:4n-6	beta-oxidation peroxisomes	⇩
⇩		C22:6n-3
C24:5n-6		docosahexaenoic acid (DHA)
⇩		
C22:5n-6		
docosapentaenoic acid		

Figure 2 Essential fatty acid metabolism desaturation and elongation of ω6 and ω3

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